



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/930,665

08/15/2001

Sudhindra Pundaleeka Herle

SAMS01-00152

3249

7590

04/19/2005

Docket Clerk
P.O. Drawer 800889
Dallas, TX 75380

EXAMINER

FERRIS, DERRICK W

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,665

Applicant(s)

HERLE ET AL.

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,091,733 A to *Takagi et al.* ("*Takagi I*") in view of U.S. Patent No. 6,272,148 B1 to *Takagi et al.* ("*Takagi II*").

As such to **claim 1**, *Takagi I* discloses a packet relay device as TCP relay unit 100, see e.g., figure 3. In particular, a connection to a packet network is taught e.g., as the connection to network 610. A packet relay controller intercepting traffic between networks and reformatting the intercepted traffic to employ a first maximum transmission unit size for intercepted traffic forwarded to the packet network and a second maximum transmission size for intercepted traffic forwarded to another network is taught by the actions of the TCP relay unit 100, see e.g., column 3, lines 20-45 where the TCP size is adjusted by the relay unit. As the TCP size is adjusted, a first and second maximum size for a packet is taught since the TCP size is adjusted in at least one direction. The packets are also reformatted based on new segment size.

Takagi I may be silent or deficient to the further limitation of a wireless network. However, as wireless can be asymmetric, *Takagi I* may teach a wireless network, see e.g., column 9, lines 5-10 since the TCP relay device 100 is between a symmetric network 610

Art Unit: 2663

and an asymmetric network 620. However, assuming the above limitation is not clear from the reference, the examiner notes the following obviousness rejection below.

Takagi II teaches the further recited limitation above at e.g., figure 1.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify the TCP relay unit 100 to include a wireless interface as taught by *Takagi II* as part of the gateway device 900 with respect to a TCP relay unit 600 (i.e., for the purpose of the rejection the TCP relay unit 100 and gateway device 900 are the same where the asymmetric network 620 is the wireless network).

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to transmit data of a wireless network in order to reach remote subscribers. In particular, *Takagi II* cures the above-cited deficiency by providing a motivation found at e.g., figure 2 where the radio terminals are remote subscribers. In addition, *Takagi II* also teaches using an asymmetric network as a wireless network e.g., at column 11, lines 25-35. Second, there would be a reasonable expectation of success since both reference teach transmitting TCP segments through a gateway. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claims 2**, since the links for the wireless network are asymmetrical, the speeds in the downlink and uplink are different (i.e., the segment sizes are different). As

such, since the packets are divided the segment size for the wireline network is by definition larger than the wireless network.

As to **claims 3**, an optimal segment size is chosen based on the properties of the link such as the acknowledgments. In addition, *Takagi II* also teaches using different segment sizes as taught e.g., at column 11, lines 25-35.

As to **claim 4**, see combination of claims 1 and 3.

As to **claims 5**, see e.g., column 12, lines 33-36 of *Takagi II* with respect to reassembling divided packets.

As to **claims 6**, see e.g., column 3, lines 20-34 of *Takagi I* with respect to fragmenting.

As to **claims 7**, see e.g., similar rejection to claim 1 where the relay device is an Internet protocol level proxy within an interface between a wireless communications system and an internal packet network for an enterprise operating the wireless communications system. In particular, the relay device acts as a proxy and handles IP traffic.

As to **claims 8**, see e.g., similar rejection to claim 1.

As to **claims 9**, see e.g., similar rejection to claim 2.

As to **claims 10**, see e.g., similar rejection to claim 3.

As to **claims 11**, see e.g., similar rejection to claim 4.

As to **claims 12**, see e.g., similar rejection to claim 5.

As to **claims 13**, see e.g., similar rejection to claim 6.

As to **claims 14**, see e.g., similar rejection to claim 7

Art Unit: 2663

As to **claims 15**, see e.g., similar rejection to claim 1.

As to **claims 16**, see e.g., similar rejection to claim 2.

As to **claims 17**, see e.g., similar rejection to claim 3.

As to **claims 18**, see e.g., similar rejection to claim 4.

As to **claims 19**, see e.g., similar rejection to claim 5.

As to **claims 20**, see e.g., similar rejection to claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123.

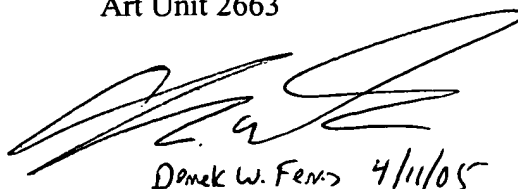
The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF



Derrick W. Ferris 4/11/05